

**USE OF RECOMBINANT LIVE-ATTENUATED PARAINFLUENZA
VIRUS (PIV) AS A VECTOR TO PROTECT AGAINST DISEASE
CAUSED BY PIV AND RESPIRATORY SYNCYTIAL VIRUS (RSV)**

ABSTRACT OF THE DISCLOSURE

5 Chimeric parainfluenza viruses (PIVs) are provided that incorporate a PIV
vector genome or antigenome and one or more antigenic determinant(s) of a heterologous
PIV or non-PIV pathogen. These chimeric viruses are infectious and attenuated in humans
and other mammals and are useful in vaccine formulations for eliciting and immune
responses against one or more PIVs, or against a PIV and non-PIV pathogen. Also provided
10 are isolated polynucleotide molecules and vectors incorporating a chimeric PIV genome or
antigenome which includes a partial or complete PIV vector genome or antigenome
combined or integrated with one or more heterologous gene(s) or genome segment(s)
encoding antigenic determinant(s) of a heterologous PIV or non-PIV pathogen. In preferred
aspects of the invention, chimeric PIV incorporate a partial or complete human PIV vector
15 genome or antigenome combined with one or more heterologous gene(s) or genome
segment(s) from a heterologous PIV or non-PIV pathogen, wherein the chimeric virus is
attenuated for use as a vaccine agent by any of a variety of mutations and nucleotide
modifications introduced into the chimeric genome or antigenome.

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